IAEA Newsbriefs

REPORTS ON GLOBAL ACTIVITIES OF THE INTERNATIONAL ATOMIC ENERGY AGENCY VIENNA, AUSTRIA

Vol. 8, No. 1 (58)
JANUARY/FEBRUARY 1993

THE ICTP AT TRIESTE: SETTING THE RECORD STRAIGHT

IAEA refutes misleading media report on International Centre for Theoretical Physics

In a press release issued on 8 January 1993, the IAEA moved to set the record straight about a misleading newspaper article on activities at the International Centre for Theoretical Physics (ICTP), an international research institute which is jointly overseen by the IAEA and United Nations Educational, Scientific and Cultural Organization (UNESCO). The article had sought to portray the ICTP as an institution that could be used by scientists from developing nations to conduct research "related to nuclear weapons, missile systems or other military technologies". The article was published in the United States by the *Washington Post* on 24 December 1992.

In describing the newspaper article as "misleading", the IAEA said that it "distorts reality" in suggesting military-related activities at the ICTP.

"Had the *Washington Post* writers scrutinized the Centre's programme in more depth, they would have found that there was little in it that could be of real use for anyone interested in building nuclear weapons," the IAEA said in its press release. "No courses or research occur in the fields of enrichment of uranium, reprocessing or the production of heavy water. Opinions may vary on where the line should be drawn in curricula to avoid unintentionally providing training that would be of real use for military purposes, but this line has been drawn with adequate prudence in Trieste.

"It should also be noted that the research work is closely supervised and that there is no evidence that the Centre's facilities or staff have been involved in activities related to military nuclear applications. Also, the stays of visiting scientists are typically of short duration.

"It is hence mischievious, misleading and malevolent to suggest by inference, as did the *Washington Post* article, that the IAEA — specifically charged by governments with promoting peaceful applications of nuclear energy and with helping to prevent the proliferation of nuclear weapons — would permit misuses of the ICTP in ways that would run counter to this latter mission."

The press release emphasized that the ICTP, since its establishment in 1964, has been dedicated to the promotion of scientific progress in developing nations across a wide spectrum of disciplines. It noted that some 4000 scientists and mathematicians from countries all over the world visit the Centre each year, and it underlined the fact that 250 to 300 scientists from the United States visit the Centre each year and take part in its scientific activities, most of them in the capacity of lecturers or course directors. Seventeen Nobel Laureates from the United States have visited and worked at the Centre, and the Chairman of its Scientific Council is Professor Robert Schrieffer, Nobel Laureate in Physics 1972, from the University of Florida, Tallahassee.

"Both the IAEA and UNESCO believe that the ICTP is a useful, cost-effective instrument to foster the advancement of science and its application in technology, notably in the Third World," the IAEA said. "This view is also shared by the Italian Government which not only hosts the Centre but has provided the bulk of its funding over the years. Other donors include Sweden, Kuwait, United Kingdom, Spain, Brazil, Canada, France, and Iran."—*Copies of the press release may be obtained from the IAEA Division of Public Information.*

IAEA Board meets in February

IAEA BOARD OF GOVERNORS. The first meetings in 1993 of the IAEA Board of Governors are scheduled to begin at IAEA headquarters in Vienna on Monday, 22 February. Other meetings during 1993 of the Board and its committees are scheduled in May, June, September, November, and December.

At meetings in early December 1992, the Board considered matters related to safeguards, reactor projects, the IAEA's financial situation, and technical co-operation, among other items. *(See the following item on technical co-operation.)*

Safeguards. The Board took note of a report by IAEA Director General Hans Blix on safeguards developments, including the implementation of IAEA safeguards in the Democratic

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People's Republic of Korea (DPRK) and in South Africa under comprehensive safeguards agreements each State has concluded with the IAEA in connection with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). The report said that IAEA activities are progressing in the DPRK to verify the correctness and completeness of the government's initial report, by means of on-site inspections and other verification measures. In South Africa, the report noted that in co-operation with South African authorities progress had been achieved in a number of areas. The IAEA is conducting inspection missions in South Africa involving six major facilities.

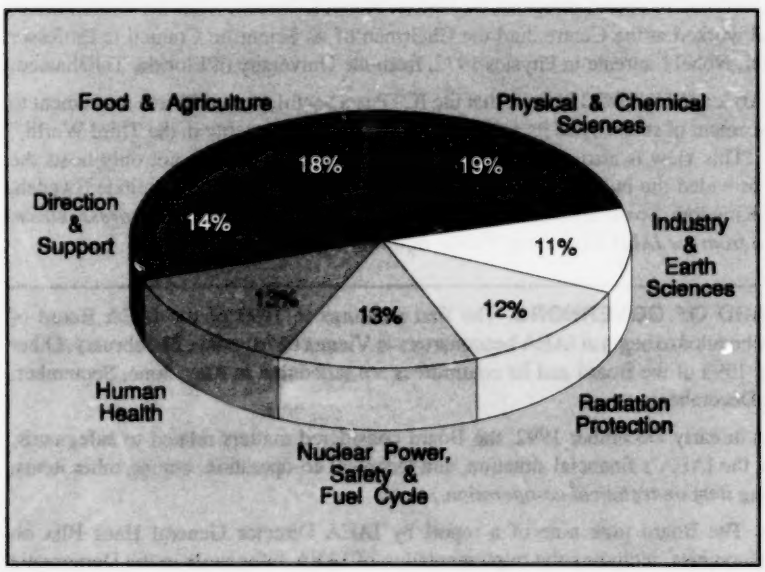
The report further reviewed developments regarding measures to strengthen the IAEA's safeguards system, and steps that the Agency is taking with respect to safeguards activities in newly independent States emerging from the dissolution of the Soviet Union. Four of these States now have adhered to the NPT, and the required safeguards agreement under the NPT with Lithuania has entered into force. Safeguards agreements with Uzbekistan, Azerbaijan, and Estonia are expected to be concluded in the near future. Preparatory activities have been initiated in a number of other States, including Ukraine, Belarus, and Kazakhstan, which have declared their intentions to adhere to the NPT in the future, the report said. The activities include technical visits, fact-finding missions, and seminars designed to provide the Agency with much of the information necessary for implementing safeguards and to assist these States in that field.

Reactor projects. The Board approved requests by Indonesia for assistance in securing the transfer of enriched uranium for research projects. The requested material is to be supplied by the United States for use in projects of the Indonesian National Atomic Energy Commission at the Bandung Reactor Centre, the Radioisotope Production Centre at Serpong, and the Nuclear Fuel Element Centre at Serpong.

Financial situation. The Board approved financial measures concerning the implementation of deferred programme activities. In informing the Board about the Agency's financial situation, Dr. Blix said that it continues to be "precarious" because of arrears in assessed contributions of some Member States. In light of uncertainty about payments for 1993, the IAEA's financial plan had to be cut by 12% for each department, he said.

More than 630 IAEA technical co-operation projects funded

TECHNICAL CO-OPERATION PROGRAMME FOR 1993-94. Technical experts, equipment, and training valued at US $87.5 million are scheduled to be provided over the next two years under the IAEA's technical co-operation programme which supports nuclear energy's peaceful development around the world. A report on the proposed biennial programme was adopted by the IAEA Board of Governors' Technical Assistance and Co-operation Committee at a meeting on 3 December 1992 in Vienna. Under the programme, over US $42 million is earmarked for assistance in 1993 and over US $45 million in 1994.



Funds are allocated for 634 projects — 507 new projects and 127 ongoing — in Africa, Latin America, Asia and the Pacific, and Middle East and Europe, including several interregional projects. As in previous years, Africa would receive the largest share of fund allocation — 27.9% — reflecting the emphasis placed on least developed Member States, eight of which are in Africa.

Specific areas receiving attention during 1993-94 include radiation protection, safety of nuclear installations, radioactive waste management and nuclear fuel cycle activities, and human health. *(See graph.)* Assistance will continue to be provided to other areas of nuclear applications, including food and agriculture, industry and earth sciences, and physical and chemical sciences. — *More information may be obtained from the IAEA Department of Technical Co-operation.*

ASSESSMENT OF RADIOACTIVE WASTE DUMPING IN ARCTIC SEAS. Experts at the IAEA and its Marine Environmental Laboratory (IAEA-MEL) in Monaco are playing key roles in an international scientific programme to assess the impact of radioactive waste dumping in the Arctic Seas. The work is in response to concerns over the possible health and environmental implications of the dumping of high-level radioactive wastes in the shallow waters of the Kara Sea and of other radioactive wastes in neighbouring seas.

The IAEA already has participated in the Russian-Norwegian experimental programme of preliminary assessment, and it is now co-ordinating and contributing to a longer term international action plan. Presently the IAEA's Waste Management Section, in collaboration with Russia and Norway, is organizing a meeting from 1-5 February in Oslo that will bring together international experts as part of the long-term assessment programme.

The IAEA's plans for the long-term programme carry five principal objectives: ● to assemble all available information on the waste sources and containments, waste locations, relevant oceanography, and potential radionuclide pathways to humans; ● to review and discuss past and current knowledge on the radioactivity levels in the area; ● to evaluate predictions of radioactive contamination resulting from potential leakage at the dump sites based on a number of mathematical models addressing various dispersal scales; and to discuss further modelling developments; ● to assess present and future health effects and the environmental impacts of the dumping; ● to consider the feasibility of possible remedial actions, including recovery, and to propose possible courses of action with regard to the dumped waste materials. The IAEA's plans were endorsed in November 1992 by the Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Dumping Convention, now known as the London Convention, 1972). Findings from the IAEA's work will be reported to the Contracting Parties.

Key roles for IAEA and its Marine Environment Laboratory

In August-September 1992, the IAEA's Marine Environmental Laboratory provided technical support to a joint Norwegian-Russian expedition to the Kara and Barents Seas. During the cruise, scientists collected marine sediment samples that now are being analysed for radionuclide content by Norwegian and Russian laboratories and independently at IAEA-MEL. For quality assurance purposes, IAEA-MEL additionally organized a specific analytical exercise by distributing sediment samples from the Kara Sea to the Norwegian and Russian laboratories.

Preliminary results from IAEA-MEL provide independent confirmation of the joint study's shipboard finding in September 1992 that radioactive contamination in the Kara Sea in general was extremely low, presenting no significant radiological danger. More detailed investigations are planned to continue during 1993. In support of this radioanalytical programme, IAEA-MEL also has implemented an extensive suite of computer models for assessing the regional and global dispersal of contaminants from the dump sites and for estimation of their potential radiological conseqences.—*More information may be obtained from the IAEA's Division of Nuclear Fuel Cycle and Waste Management, and from IAEA-MEL, B.P. 800, MC 98012 Monaco Cedex.*

Sixteen inspections completed through 1992

IAEA NUCLEAR INSPECTIONS TO IRAQ. The IAEA concluded its latest inspection of Iraq's nuclear programme in early December, reporting the possibility of some change in the Iraqi position not to provide requested procurement information: Iraqi authorities indicated a willingness to consider a consolidated list of unanswered questions. The IAEA has been pressing the procurement issue since the beginning of inspection activities in Iraq under terms of United Nations Security Council resolutions. From May 1991 through December 1992, the IAEA has conducted 16 on-site nuclear inspections in Iraq.

Results to date provide a comprehensive and detailed picture of the Iraqi nuclear programme, though doubts remain as to its completeness. "Iraq's unwillingness so far to reveal foreign sources

of equipment, material, and technology makes it difficult to ascertain whether all nuclear-related important equipment and material has been identified," IAEA Director General Hans Blix said in a statement to the Security Council on 23 November 1992. "New information, positively evaluated by the Special Commission and the Agency, could also point to sites which would require inspection, after designation by the Special Commission. We therefore see a need for continued on-site inspection."

In addition to ongoing inspections, the IAEA is phasing in elements of a long-term monitoring plan of Iraq's nuclear programme, the full implementation of which is meeting "some co-operation and some resistance from the Iraqi side", Dr. Blix informed the Security Council. The plan includes *inter alia* the periodic control of radionuclides and other selected, stable nuclides of the main water bodies in Iraq. A radiometric survey of Iraq's surface waters was concluded in November 1992 by the 15th IAEA inspection team. The goal is to look for evidence of prohibited activities and to establish a baseline for the longer term monitoring programme.

The IAEA further is attaching priority to the removal of highly enriched uranium in irradiated reactor fuel assemblies. The material has been verified by the Agency's teams and is being kept under its control until it is removed. Removal awaits conclusion of the necessary arrangements with recipient countries. All other *known* materials, as well as buildings and equipment, that could be used for nuclear weapons purposes have been destroyed or rendered harmless by IAEA inspection teams or under their supervision.

UN General Assembly commends work of the IAEA

UNITED NATIONS RESOLUTION. The 47th General Assembly of the United Nations has commended the IAEA for its efforts in detecting, destroying, and otherwise rendering harmless equipment and material that could be used for nuclear weapons, particularly noting actions related to IAEA nuclear inspections in Iraq.

In a resolution adopted on 22 October 1992, the General Assembly further urged all States to co-operate with the IAEA in strengthening technical assistance for developing countries, and in promoting the use of nuclear energy and measures to strengthen the safety of nuclear installations. It also welcomed the IAEA's decisions to strengthen its safeguards system.

Statement by IAEA Director General. In a statement to the UN General Assembly in October, IAEA Director General Hans Blix singled out actions for strengthening the nuclear verification system to increase the probability of detecting violations, drawing on the lessons of Iraq. He also raised some thoughts on the potential for other uses of the IAEA safeguards system in the context of nuclear disarmament. Given adequate resources, IAEA safeguards could be employed to verify the peaceful storage or use of fissionable materials recovered from the dismantling of nuclear weapons, he said, as well as for a cut-off of production of fissionable material for weapons purposes. Dr. Blix said there also could be renewed consideration of the concept of international plutonium storage, i.e., arrangements under which the growing quantities of plutonium expected from dismantled weapons would be subjected to special controls, which would give additional assurances concerning non-diversion and an exclusively peaceful use. — *The full text of the Director General's UN statement is available from the IAEA Division of Public Information.*

INSAG issues update on Chernobyl accident

INTERNATIONAL NUCLEAR SAFETY ADVISORY GROUP. A new report on the Chernobyl accident has been issued by the International Nuclear Safety Advisory Group (INSAG). INSAG is an advisory body of 15 senior officials whose members are appointed by the IAEA Director General for a 3-year term.

The report — entitled *The Chernobyl Accident: Updating of INSAG-1* and commonly referred to as INSAG-7 — is based on new information that has been revealed since 1986 and the publication of INSAG-1, *Summary Report on the Post-Accident Review Meeting on the Chernobyl Accident.* The information bears on general issues of the safety of nuclear power plants at that time in the USSR, as well as on specific issues relating to the design of the Chernobyl-type reactor, or RBMK. The information prompted INSAG to review its former conclusions about the causes of the Chernobyl accident, which occurred in April 1986. Based on this review, the group found that design factors had played a greater role in the accident than previously known. The INSAG-7 report states:

"The accident is now seen to have been the result of the concurrence of the following major factors: specific physical characteristics of the reactor; specific design features of the reactor

control elements; and the fact that the reactor was brought to a state not specified by procedures or investigated by an independent safety body. Most importantly, the physical characteristics of the reactor made possible its unstable behaviour."

INSAG-7 points out that efforts to enhance the safety of RBMK reactors are continuing. The report includes a number of conclusions and an appendix of important measures being taken. In a foreword to the report, IAEA Director General Hans Blix commends INSAG's efforts and underscores the importance of implementing improvements and applying the accident's major lessons. In noting that "sustained efforts" are required, he states that INSAG's conclusions "will broaden the basis for international consultations to enhance the safety of RBMK reactors." — *The new INSAG report may be purchased from the IAEA Division of Publications.*

Project planned to strengthen nuclear infrastructures

NUCLEAR SAFETY IN EASTERN EUROPE. The IAEA is planning to launch a programme to assist countries of the former USSR to build stronger infrastructures for both radiation protection and nuclear safety. High-level government officials are expected to attend a forum at the IAEA in early 1993 to review the needs of individual countries and to identify ways in which assistance can be used most effectively. The programme is expected to be a joint initiative of the IAEA and United Nations Development Programme (UNDP).

Within the framework of an ongoing IAEA project, experts recently reviewed the results of safety evaluations of RBMK reactors operating in former Soviet republics, as well as the technical basis for safety improvements. They met in Vienna at a consultants' meeting concluding in early November. Attending were some 30 safety specialists from 13 countries, the Commission of the European Communities (CEC), and the IAEA, as well as RBMK specialists from Russia, Ukraine, and Lithuania, where all the world's RBMKs are located.

The meeting specifically focused on four technical areas in which safety modifications have been proposed for the RBMKs. These were: core monitoring and control; pressure boundary integrity; accident mitigation, including safety systems and confinement; and electric power supply, including emergency power. In general, the experts were of the view that safety levels would be raised by modifications now being implemented or proposed in these areas. They further noted significant differences among all the operational RBMKs, and identified a number of specific technical areas where further analysis is required.

The RBMK project is among a range of IAEA technical services supporting national and international efforts to upgrade levels of nuclear safety in Central and Eastern Europe. The work is being co-ordinated with the consortium of donor and recipient countries, known as the Group of 24 (G-24) which is serving as the overall co-ordination mechanism for safety assistance in Eastern Europe. The G-24 recently set up a full-time Secretariat at the Commission of the European Communities in Brussels. The IAEA interacts with the G-24 in a technical advisory capacity, and in supporting the development of an effective databank of assistance activities.— *More information may be obtained from the IAEA Division of Nuclear Safety.*

Nuclear safety services

ASSET AND OSART MISSIONS. Under two IAEA programmes, international teams of experts are scheduled to conduct on-site safety reviews at nuclear plants in fourteen countries in 1993.

Operational Safety Review Teams (OSARTs). Visits to nuclear power plants in eleven countries are scheduled this year under the OSART programme. Missions are planned to Gravelines in France (15 March-2 April), to Krsko in Slovenia (5-23 July); and tentatively to Ulchin in the Republic of Korea (July/September), and Embalse in Argentina (late 1993). Pre-OSARTs (missions to plants under construction) are scheduled to Mochovce in Slovakia (11-29 January), Cernavoda in Romania (19 April-7 May), and Guangdong in China (17 May - 4 June). Additionally, follow-up OSART visits are planned to Koeberg in South Africa (29 March-2 April), Kozloduy in Bulgaria (26-30 April), Grafenrheinfeld in Germany (20-24 September), and to Fukushima Daiichi in Japan (October/November).

Assessment of Safety Significant Events Team (ASSET). Under the ASSET programme, 15 missions are scheduled: Borssele in the Netherlands (12-14 January, and 7-18 June); Ignalina in Lithuania (1-12 February, and 12-16 July); Khmelnitsky in Ukraine (8-19 March); Leningrad (Sosnovy Bor) in Russia (17-28 May); Rovno in Ukraine (28 June-2 July, and 22 November-3 December); Bohunice in the Slovak Republic (5-9 July); Smolensk in Russia (19-30 July);

Balakovo in Russia (30 August - 3 September); Kozloduy in Bulgaria (6-17 September); Kola in Russia (4-8 October); Dukovany in the Czech Republic (11-22 October); and Novovoronezh in Russia (8-12 November).

Both OSART and ASSET missions are conducted at the request of the individual countries. OSART teams address operational safety practices in specific areas of nuclear plant safety and regulation, ranging from operator training in plant safety procedures, practices, and systems to technical support and radiation protection practices. ASSET services, which are of five basic types, focus on operational safety experience from the standpoint of events that have occurred. The assessment techniques include an investigation methodology to identify safety issues, assess their significance, and identify their root causes, thereby providing practical guidance in eliminating the potential causes of future incidents. — *More information may be obtained from the IAEA Division of Nuclear Safety.*

Upcoming symposia

INTERNATIONAL SYMPOSIUM ON COST-BENEFIT ASPECTS OF FOOD IRRADIATION, *1-5 March 1993, Aix-en-Provence, France.* Some 24 countries worldwide are increasingly using irradiation technology for treating a variety of food and food ingredients on a commercial scale. The trend in such applications is expected to increase further in the coming years, particularly in view of the prohibition of a number of fumigants used in food preservation and the increasing number of irradiation facilities available for food processing. The symposium is organized in response to the need to evaluate the costs/benefits of irradiation for treating various food items either alone or in combination with other processes. Such evaluations cover not only actual applications of the technology in terms of reducing food losses but also its potential economic impact in controlling pathogens causing certain food-borne illnesses and in expanding trade of certain food items. — *More information may be obtained from the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture.*

WASTE MANAGEMENT '93 SYMPOSIUM, *28 February - 4 March 1993, Tucson, Arizona.* This symposium, the 19th in a series, annually brings together leading experts in the field. Topics to be covered include research, development, and operational experience in the management of both high- and low-level nuclear waste, mixed waste, mill tailings, environmental restoration, and decommissioning projects. Papers concerning national and international agreements and regulations governing these topics, as well as the impact of these activities on the environment also are being featured. The symposium is being organized by the American Nuclear Society in co-operation with the IAEA.— *More information may be obtained from the IAEA Division of Nuclear Fuel Cycle and Waste Management.*

INTERNATIONAL SYMPOSIUM ON APPLICATION OF ISOTOPE TECHNIQUES IN STUDYING PAST AND CURRENT ENVIRONMENTAL CHANGES IN THE HYDROSPHERE AND THE ATMOSPHERE, *19-23 April 1993, Vienna, Austria.* Environmental isotopes are one of the most powerful tools to investigate past and current environmental changes in the atmosphere. In particular, they have proved to be very useful indicators of climate-related parameters such as surface air temperatures, relative humidity, or amount of precipitation. The symposium should stimulate the international exchange of information and ideas, perhaps leading to new and improved methods for using isotope techniques in research of global climate change. It is being organized jointly by the IAEA and United Nations Educational, Scientific and Cultural Organization (UNESCO).— *More information may be obtained from the Division of Physical and Chemical Sciences.*

INTERNATIONAL SYMPOSIUM ON MEASUREMENT ASSURANCE IN DOSIMETRY, *24-27 May, Vienna, Austria.* This symposium, which focuses on applications of radiotherapy, will cover the entire dose calibration chain and the different procedures for quality assurance, beginning with the determination of an international reference standard and up to the dose measurements at the radiotherapy centre. More than half of all cancer patients in developed countries with a comprehensive cancer programme are likely to receive radiotherapy at some stage. The success of treatments often depends on the possibility of irradiating the target region within a very narrow dose window, meaning that the accuracy in dose calibration procedures must be very high. Doses that are too high bring unacceptable complications and those that are too low result in the recurrence of the tumor. —*More information may be obtained from the IAEA Division of Life Sciences.*

Recent IAEA seminars and symposia

SEMINAR IN INDIA: ISOTOPE TRACERS IN HUMAN NUTRITION RESEARCH. At the invitation of the Government of India, the IAEA recently held a seminar on isotope tracers in human nutrition research in Hyderabad, India. The seminar identified and reviewed all appropriate applications of isotope techniques in human nutrition research, including new applications expected to become important in the near future. Scientists and technical personnel involved in isotopic and nuclear analytical techniques from Asia and the Pacific, as well as from parts of Africa, attended.

Isotope techniques have many important applications in monitoring and researching nutritional problems affecting millions of people in different countries, including more than 100 developing countries. The most important problems are the micronutrient deficiences, particularly of iodine and iron. Isotope techniques, for example radioimmunoassay, are used to diagnose iodine deficiency disorders or for research on means to avoid them. Stable isotope tracers are also invaluable tools in studies of protein turnover and requirements.

Through various technical sessions, the seminar identified techniques and applications that were most promising as well as those meriting support by the IAEA under its research contract and technical co-operation programmes. Additionally, results of the Agency's co-ordinated research programme on isotope-aided studies of the bio-availability of iron and zinc from human diets were presented during the seminar. — *More information may be obtained from the IAEA Division of Life Sciences.*

Nuclear techniques in health care

SEMINAR IN THAILAND: IMMUNOASSAY METHODS IN THE DIAGNOSIS OF COMMUNICABLE DISEASE. Recent developments in radionuclide tracer-based and related *in vitro* techniques in epidemiology, diagnosis, and immunology of communicable techniques were discussed in an IAEA seminar recently held in Bangkok, Thailand. Such techniques are being increasingly used in the Asia-Pacific region to solve clinical problems that are both diagnostic and therapeutic in nature. However, many clinicians and biomedical scientists in the region are still unaware of the potential impact of these techniques to control communicable disease. The seminar provided a forum to review some of these techniques and their application in research and disease control. Experts from within and outside the Asia-Pacific region presented their experiences in the application of *in vitro* techniques for disease control, particularly on the use of nucleic acid probes labelled with phosphorus-32 and immunoradiometric assays. — *More information may be obtained from the IAEA Division of Life Sciences.*

Public information meetings

MEETINGS IN INDONESIA, MALAYSIA, AND JAPAN: STRENGTHENING NUCLEAR COMMUNICATION. The governments of Indonesia, Malaysia, and Japan separately have hosted IAEA public information meetings on nuclear energy issues recently.

From 12-13 December 1992, in Tokyo, more than 200 teachers from the Tokyo metropolitan area attended an international symposium on energy education. Sessions featured reports on the status of energy education in various countries, including the United Kingdom, Canada, France, Sweden, and Japan, and presentations on specific programmes for schools and the general public.

From 11-13 November, in Jakarta, journalists and governmental officials participated in a regional seminar on nuclear power and public information. The seminar included a technical visit to the Serpong Nuclear Centre of the National Atomic Energy Agency. Major topics covered during sessions included international efforts in nuclear safety; nuclear waste management; nuclear techniques in industry; and radiation and health issues.

From 17-18 November, in Kuala Lumpur, Malaysian journalists attended a national seminar on nuclear science and technology organized in co-operation with the Instituit Akhbar Malaysia (IAM) and Nuclear Energy Unit (NEU). Sessions included presentations on the development, use, and acceptance of nuclear technologies in industry, agriculture, and other fields; risks and benefits of energy systems; radiation issues; and nuclear power development.

The meetings were the latest in a series under an extrabudgetary IAEA public information programme sponsored by Japan. For 1993, meetings are being planned in Chile, Poland, Republic of Korea, and China.— *More information may be obtained from the IAEA Division of Public Information.*

Updated edition of "Red Book" issued

URANIUM CONDITIONS. A comprehensive update of worldwide uranium supply and demand has been jointly published by the IAEA and Nuclear Energy Agency of the Organisation for Economic Co-operation and Development (NEA/OECD). Based on information up to 1991, the book — entitled *Uranium Resources, Production and Demand* and commonly known as the "Red Book" — draws attention to significant changes now taking place in the uranium supply industry. Assessments are based on data from more than 40 countries, including for the first time new information about Bulgaria, Hungary, România, Viet Nam, the former German Democratic Republic, and the former Soviet Union.

Over the short term, the report foresees some change to the prevailing downward trend in uranium production. Throughout the early 1990s, it forecasts a slight increase in annual production capability from existing and committed production centres in reporting countries. Total world production, however, is not expected to reach world nuclear reactor requirements. The shortfall could be delayed by a continued drawdown of already accumulated surplus inventory, the report states, or by a combination of other developments, including new production centres or imports from East European and Asian countries. *—More information may be obtained from the NEA/OECD, 38 boulevard Suchet, 75016 Paris, France.*

Briefly noted...

● **Myanmar, Namibia, and Niger have acceded to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).** Myanmar acceded on 2 December 1992, and Namibia and Niger on 7 and 9 October 1992, respectively. During 1992, altogether nine States joined the NPT, bringing the Treaty's membership to more than 150 States. Other countries joining the NPT in 1992 include Estonia, Slovenia, Uzbekistan, Azerbaijan, China, and France. By region, the Treaty's membership now includes 56 States in Africa and the Middle East, 36 in Europe, 33 in Asia and the Pacific, and 29 in the Americas. ● **Forty-six countries have officially informed the IAEA that its regulators and operators now are using the International Nuclear Event Scale (INES).** INES and its related procedures are intended to provide a sound and consistent technical basis for assessing the relevance of events and for rating their significance to the safety of nuclear installations, as well as providing a uniform rating system for use by public information officials and the news media. Nuclear regulators and operators additionally value the INES approach as a tool to help them allocate resources required for preventing incidents and accidents at nuclear installations. *—More information may be obtained from the IAEA Division of Nuclear Safety.* ● **A simulator for the Bohunice WWER-440/213 nuclear power plant in Slovakia is being developed by the IAEA in co-operation with a US-based firm.** The simulator is designed to provide an environment in which operators can be trained to properly handle certain safety procedures before and during severe accidents. The PC-based system displays the physical layout of the plant on colour monitors and can graphically simulate plant accident conditions, allowing the operator to make corrective actions and to view their results. *— More information may be obtained from the IAEA Division of Nuclear Safety.* ● **The IAEA Director General has announced the appointment of Mr. David B. Waller from the United States as Deputy Director General in the Department of Administration; he succeeds Mr. William J. Dircks.** Mr. Waller's appointment takes effect 1 January 1993. In the Department of Technical Co-operation, the Director General also has announced the appointment of Mr. Paulo Barretto as Director of the Division of Technical Co-operation Programmes effective 1 January 1993. ● **Hans Grümm, the IAEA's Deputy Directory General for Safeguards from 1978-83, has written a book that includes an account of his experience at the Agency.** Entitled *Drei Leben — Krieg, Partei, Atom*, the 400-page memoire (in German) is available from Löcker Verlag, Annagasse 3a, A-1010 Vienna, Austria. ● **Former Director General of the IAEA, Dr. Sigvard Eklund, has been honoured in the United States.** In November 1992, Dr. Eklund became an honorary lifetime member of the American Nuclear Society for his contribution "in laying the foundations for the peaceful uses of nuclear energy". ● **The two successor States to Czechoslovakia — the Czech Republic and the Slovak Republic — soon are expected to apply for membership of the IAEA.** Czechoslovakia, a member of the IAEA since 1957, ceased to exist on 31 December 1992.

93-00202

IAEA Newsbriefs is published regularly by the Division of Public Information of the International Atomic Energy Agency, P.O. Box 100, A-1400 Vienna, Austria. Telephone: (43-1) 2360-1270. Facsimile: (43-1) 234564. Telex: 1-12645.

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